

Iowa Department of Natural Resources

Draft Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

The Iowa Department of Natural Resources (DNR) finds that:

1. City of Ames Combustion Turbine Station, located at 2200 Pullman Street, Ames, IA has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Donald Kom.
2. City of Ames Combustion Turbine Station is an Electric Generating facility. This facility consists of 2 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 2.5 \mu\text{m}$)	PM _{2.5}	32.32
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	32.32
Particulate Matter	PM	32.32
Sulfur Dioxide	SO ₂	24.33
Nitrogen Oxides	NO _x	1392.44
Volatile Organic Compounds	VOC	1.00
Carbon Monoxide	CO	62.90
Lead	Lead	0.02
Hazardous Air Pollutants ⁽¹⁾	HAP	2.32

⁽¹⁾ May include the following: Acetaldehyde, Acrolein, Arsenic Compounds, Benzene, Beryllium Compounds, 1,3-Butadiene, Cadmium Compounds, Chromium Compounds, Ethyl-benzene, Formaldehyde, Manganese Compounds, Mercury Compounds, Naphthalene, Nickel, PAH, Propylene Oxide, Selenium, Toluene, and Xylenes (Mixed Isomers)

3. City of Ames Combustion Turbine Station submitted a Title V Operating Permit renewal application on June 10, 2021. Based on the information provided in these documents, DNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
4. DNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

DNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the draft permit will run from March 10, 2022 through April 9, 2022. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Derek Wedemeier at the DNR address shown below. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. DNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Derek Wedemeier at the DNR address shown below.
3. DNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, DNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

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DNR concludes that:

1. DNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-35, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. DNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-35.
4. DNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the DNR from pursuing enforcement action for any violation.

Title V Application Review Notes R4

Applicant:	City of Ames
SIC Code:	4911
City:	Ames
County:	Story, Field Office #5
EIQ#:	92-5831
Facility#:	85-01-006
Permit #:	99-TV-022R4
Reviewer:	Derek Wedemeier
Date:	3/10/2022

Facility Identification

Facility Name:	City of Ames Combustion Turbine Station
Facility Location:	2200 Pullman Street
Responsible Official:	Mr. Donald Kom
Phone:	515-239-5171

The Part 70 Title V Operating Permit for City of Ames Combustion Turbine Station. The facility is an electric generating facility. The City of Ames Combustion Turbine Station has 2 significant emission units and 1 insignificant emission unit.

Title V Major Source Status by Pollutant:

Pollutant	Major for Title V?
PM ₁₀	<input type="checkbox"/>
SO ₂	<input checked="" type="checkbox"/>
NO _x	<input checked="" type="checkbox"/>
VOC	<input type="checkbox"/>
CO	<input type="checkbox"/>
Lead	<input type="checkbox"/>
Individual HAP	<input type="checkbox"/>
Total HAPs*	<input checked="" type="checkbox"/>

*This facility is not major on its own for HAPs but major source status is determined by combining with the City of Ames Steam Electric Plant.

Program Applicability

1. Title IV: GT1 (EU1) is not Title IV effected as its rated capacity is less than 25MW. GT2 (EU 3) Clean Air Interstate Rule (CAIR) Permit was replaced with currently applicable Cross State Air Pollution (CSAPR) regulations.
2. Subject to 112(r) Prevention of Accidental Releases? No
3. PSD: Yes, Fossil Fuel-Fired Steam Electric Plants of more than 250 MMBtu/hr
4. NAAQS: Yes
5. Stratospheric ozone: Yes

6. CAM: Yes EU-3 –This facility is currently meeting the CAM requirements for NO_x control through the monitoring requirements of the Acid Rain Program. Additional information is located below (EU-3).
7. NESHAP:
40 CFR 63 Subpart YYYY
 GT2 (EP 3) is subject to 40 CFR 63 Subpart YYYY- National Emission Standard for Hazardous Air Pollutants for Stationary Gas Turbines. The facility is not major on its own for HAPs but major source status is determined by combining with the City of Ames Steam Electric Plant. Therefore, EU-3 is subject to 40 CFR Part 63, Subpart YYYY. This was determined in DNR Project Number 04-305.
8. NSPS:
40 CFR 60 Subpart GG
 GT2 (EP 3) is subject to 40 CFR 60 Subpart GG- New Source Performance Standards for Stationary Gas Turbines.

Emission Estimations

Potential Emission Values

PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	Lead	Total HAPs
Potential Emissions								
32.32	32.32	32.32	24.33	1392.44	1.00	62.90	0.02	2.32
Actual Emissions 2020*								
0.08	0.05	0.05	0.21	1.19	0.00	0.24	0.00	0.00

*The actual emissions reported for the 2020 calendar year.

The following amendments have been made to the Title V permit:

1. TV Permit number has been updated to 99-TV-022R4 (pp. 1, 4, 5, 7, and footer).
2. Table of Contents page numbers updated and Appendix details updated (pp. 2 & 30).
3. General Conditions were updated. (pp. 15).

Emission Units

EP/EU-1 (GT1)

- This emission unit is an oil fired 353.41 MMBtu/hr combustion turbine. The unit is considered an existing stationary combustion turbine because it was constructed or reconstructed before January 14, 2003. The repairs completed in 2016 did not exceed the 50% replacement cost of a new unit and therefore isn't considered reconstruction.
- This unit is not subject to NESHAP YYYY.
 - Operational requirements G & H in Section 5 of Construction Permit 72-A-078-S1 are not applicable as they reference reporting and record keeping from NESHAP YYYY. YYYY applicability is discussed in the engineering evaluation for project 16-377.
- Specific operating conditions and emission limits are located in the permit (pp. 7-8)

- Construction permit 72-A-78-S1 condition 5C has been excluded from the Title V permit as the requirements were satisfied following the repair project in 2016.
- Operational Limits & Requirements and Associated Recordkeeping condition 3B (CP 72-A-78-S1 condition 5D 2) of the title V permit will be satisfied at the end of the 2022 calendar year. Annual emissions tracking will still be required for the IDNR emission inventory reporting.

EP/EU-3 (GT2)

- This emission unit is a gas combustion turbine with an annual heat input rate limited to 344,400 MMBtu/yr. The turbine is permitted and capable of combusting both natural gas and fuel oil to provide power during times of peak demand or during power disruption. However, natural gas supply is not available on site. The emission controls use water injection and catalytic oxidation (CE-3).
- Specific operating conditions and emission limits are located in the permit (pp. 10-14).
- Annual stack testing is required for Formaldehyde for all available fuels.
 - City of Ames formally requested to remove the annual formaldehyde testing requirement from the permit on February 4, 2022. A determination was completed and established the annual testing cannot be removed from the permit because it is a requirement of NESHAP YYYY. However, the City of Ames can request a waiver of each annual test before it is due per 40 CFR § 63.7(h). The Department may approve or deny the waiver request based on the criteria in 40 CFR § 63.7(h)(4).
 - The determination request (project 22-051) shall be considered a test waiver request for the annual test due in 2022. Based on the information submitted, the request to waive the formaldehyde test due in 2022 for GT2 combustion turbine, permit 04-A-697-S2, is approved. Future annual NESHAP formaldehyde tests are required unless a test waiver is approved for each specific test. Requests for waiver must be submitted at least 60 days prior to the testing deadline.
- Stack testing must be completed for all fuels according to NSPS GG. NOx testing when combusting fuel oil has been completed. If the combustion turbine operates on natural gas stack testing for NOx must be completed within 60 days after achieving maximum production rate and no later than 180days after initial startup.
- CAM is required for this emission unit for NOx and is monitored through the requirements of the Acid Rain Program with incorporates 40 CFR Part 75 monitoring. These monitoring protocols meet the CAM requirements.